Legislative Council Panel on Housing
Subcommittee on the Long Term Housing Strategy

Projection of long term housing demand for the period 2013/14 to 2022/23

PURPOSE

We previously briefed Members on 20 March 2013 vide paper CB(1)708/12-13(02) on the Government's preliminary views on the framework for the projection of long-term housing demand. Subsequently, the Long Term Housing Strategy (LTHS) Steering Committee has discussed the methodology for projecting the long term housing demand for the ten-year period from 2013/14 to 2022/23 and the preliminary projection results. This paper briefs Members on the details of the deliberations of the LTHS Steering Committee.

DETAILS

Guiding principles

2. In developing the methodology for projecting the long term housing demand, the Steering Committee has been mindful not to over-estimate the projected housing demand, which may lead to over production. A significant supply glut could have huge negative ramifications on the housing market as happened in the aftermath of the Asian Financial Crisis in 1997. Equally, the Steering Committee is mindful that an under-estimation of demand could lead to insufficient supply of flats in the private residential market, which would result in upward pressure on flat prices, making flats unaffordable to prospective home buyers. In short, a demand-supply imbalance in the property sector could result in significant fluctuations in property prices and have serious repercussions on the wider economy.

3. With over 860 000 owner-occupiers in private permanent quarters and over one million tenants in private and public housing, many of whom aspire to buy their own homes, ensuring the stable and healthy development of the property market is vital to the economic and social stability of Hong Kong. Accordingly, the objective is to formulate a methodology that can objectively assess the long term housing demand. The projection represents the best estimate based on the latest available data and under a framework which is robust .

4. It is important to recognise that the projection is necessarily premised on a large number of variables. These are taken from the latest policies, programmes and statistical trends, all of which may change over time. The projection is also dynamic and may vary under different economic and property market circumstances. Thus, **a range of projections**, instead of a fixed target, is suggested to be produced to reflect the possible housing demand scenarios under different socio-economic and property market situations. To capture changes over time, the projection methodology and the projection results will be **reviewed on an annual basis** to provide updated projections.

Projection methodology

5. In order to project long term housing demand, it is necessary to first define clearly what should be the parameters of the factors to be included in the calculation. We consider that every household in Hong Kong should be adequately housed, irrespective of whether they live in public or private housing, or in owned or rented accommodation. As such, for the purpose of the projection of long term housing demand, housing demand is defined as the total number of **new** housing units required to be built if each and every household is to be accommodated in adequate housing over the long term.

6. Accordingly, for the purpose of housing demand projections, it is assumed that those who are already adequately housed currently will have no new needs for housing units in net terms, even though some households may move between different housing units within the existing housing stock. Only the following components will count towards the number of new housing units required –

(a) net increase in the number of households;

(b) those who will be displaced by redevelopment; and

(c) those who are inadequately housed.

7. The number of those who are currently inadequately housed should be taken into account, as they have housing needs that are now not fully satisfied. To tie in with the objective of providing adequate accommodation, in estimating the long term housing demand, there is a need to identify and to include in the estimate demand from those who are currently inadequately housed.

Adequate housing

8. As to whether or not a household is adequately housed, we consider that households in public housing (i.e. public rental housing (PRH) and subsidized sale flats), which have been built to satisfy the housing needs of the community, should be regarded as living in adequate housing. For households living in private housing, it is considered that the following circumstances should be taken into account in determining households that are inadequately housed for the purposes of the projection –

(a) if the housing unit is made up of temporary structures (e.g. huts, squatters and roof-top structures);

(b) if the unit is located in non-residential buildings (e.g. commercial and industrial buildings);

(c) if the unit is shared with other households (e.g. those living in rooms, cubicles, bedspaces and cocklofts); and

(d) if the unit is sub-divided.

9. In respect of paragraph 8 (c) and (d) above, it should be noted that depending on the actual living conditions, not all households sharing units with other households (for instance, those sharing a room) are necessarily inadequately housed per se. Similarly, given the wide range of different standards of sub-divided units in the market, the actual living environment varies under different circumstances. However, since it is indeed difficult to differentiate the living conditions of individual households among these two categories, after balancing different views, the LTHS Steering Committee is inclined to adopt a conservative approach and count **all** these households as having housing needs which are not fully satisfied in the context of the projection of the long term housing demand.

Preliminary projection results

(a) Net increase in the number of households

10. Each year, new households are formed arising from marriages, splitting of existing households, immigration, and expatriates and non-local students coming to work or study in Hong Kong. At the same time, existing households may be dissolved due to deaths, emigration and expatriates/non-local students returning to their home. It is the **net increase** in the number of households that will **generate new housing demand**.

11. Towards this end, the latest domestic household projections published by the Census and Statistics Department (C&SD) in January 2013 are used as the basis for assessing the overall physical housing demand from the net increase in the number of households. As there is no projection on a financial year basis, the average growth rate from mid-2011 to mid-2021, amounting to about **29 400 new households per year**, is adopted for projecting the housing demand in the next ten years.

12. The domestic household projections by C&SD have already taken into account demographic changes including ageing, smaller household size, the increasing number of single person households, the lower fertility rate, and longer life expectancy at birth, etc. They have also taken into account factors affecting the movement of Hong Kong residents such as Hong Kong people living and working in the Mainland, Type I babies (whose fathers are Hong Kong residents) and Type II babies (whose parents are both non-Hong Kong residents), One-way Permit Holders, expatriates and entry of talents/professionals under various schemes. As domestic household projections do not cover non-domestic households which would nevertheless occupy permanent quarters, as well as demand generated by those non-local buyers who do not sell or lease out their flats after purchase, they would be covered separately as a "miscellaneous" component (see paragraph 22 below).

13. To conduct scenario analysis on household formation under different economic and housing market conditions, an econometric modeling exercise has been undertaken. The results show that the number of household formations will be in the range of 271 950 to 316 050, depending on different economic and housing market situations. This represents a +/-7.5% from the C&SD's domestic household projections of 294 000 households over the ten-year projection period (i.e. 29 400 households per year).

(b) Households displaced by redevelopment

14. Households displaced by the redevelopment of old buildings in the public and private sectors have to be rehoused, thus generating new housing demand **on top of the net increase in household number** each year. Based on announced redevelopment plans from the Housing Authority (HA) and the Hong Kong Housing Society (HS), as well as past trends in the private sector, it is estimated that there would be a total of about 24 700 units to be redeveloped in the next ten years, with a breakdown as follows –

Redevelopment programmes	Number of units
Redevelopment of PRH	
The HA's redevelopment of Pak Tin Estate	4 100
The HA's interim housing (IH) units to be converted into PRH	1 900
The HS's redevelopment programme of Ming Wah Dai Ha	700
Sub-total (i)	***6 700***
Other redevelopment	
Redevelopment of private units (based on past trend of the number of private flats demolished in the past three years from 2010 to 2012[1])	18 000
Sub-total (ii)	***18 000***
Total = (i) + (ii)	**24 700**

15. When more information on the redevelopment programmes are available and announced later, they will be taken into account in future annual reviews of the projection on housing demand.

(c) Inadequately housed households

16. As the objective of the long term housing demand projection is to provide the basis on which Government can plan for the provision of adequate housing for each and every household in Hong Kong over the long term, households who are currently inadequately housed will require adequate housing (through public or private housing) and hence generate new housing demand in the long run. In assessing the number of inadequately housed households (IHHs), consideration has been given as to whether these households are living in temporary structures; whether they are living in non-residential buildings; whether they are living in sub-divided units; and whether they are sharing with other households. As explained above, although not all of these households are inadequately housed per se, since it is difficult to differentiate the living conditions of these households, we have adopted a conservative approach to include **all** of them in the projection of long term housing demand regardless of the actual circumstances of individual cases.

[1] The Land (Compulsory Sale for Redevelopment) (Specification of Lower Percentage) Notice, which lowered the minimum percentage of undivided shares in a lot that a person must own from 90% to 80% before the person may make an application for an order to sell all the undivided shares in the lot, came into effect on 1 April 2010. Thereafter, we observed that there had been a structural change in the nature of redevelopment programmes, as seen from the increasing trend in the number of private flats demolished in recent years. This is likely to persist in the projection period. As such, we consider it realistic to make a projection based on the average number of private flats demolished in the past three years from 2010 to 2012.

17. With regard to households living in sub-divided units, according to the results of the “Survey on Sub-divided Units in Hong Kong” commissioned by the Steering Committee, it is estimated that there are a total of 66 900 sub-divided units in Hong Kong. Detailed breakdown is as follows -

(a) 7 900 are with unobservable physical partitions (i.e. those living in rooms, cubicles, bedspaces and cocklofts inside a quarter);

(b) 22 700 are with observable physical partitions and any one of the essential facilities (kitchen or cooking area/toilet/water) is not available inside the sub-divided units; and

(c) 36 300 are with observable physical partitions and all essential facilities (kitchen or cooking area/toilet/electricity/water) are available inside the sub-divided units.

Another point highlighted in the Survey is that among the 66 900 sub-divided units, 30 600 units (as set out in (a) and (b) above) lack any one of the essential facilities (i.e. toilet, kitchen/cooking area, water supply) within the unit .

18. On paragraph 17(a) above, similar figure on households living in rooms, cubicles, bedspaces and cocklofts inside a quarter are also available from the 2011 Population Census. As the figure (i.e. 11 100 households) from the 2011 Population Census is based on a comprehensive survey and is larger than that estimated in the “Survey on Sub-divided Units in Hong Kong” (i.e. 7 900 households), consistent with the conservative approach which we have adopted, the figure in the 2011 Population Census (i.e. 11 100 households) rather than the figure in the “Survey on Sub-divided Units in Hong Kong” (i.e. 7 900 households) is adopted in our projection of housing demand.

19. For the figures in paragraph 17(b) and (c), as similar figures are not available in the 2011 Population Census, we can only use the estimated figures provided in the “Survey on Sub-divided Units in Hong Kong” in our projection. However, since some of these households may be living in older buildings susceptible to redevelopment, their housing demand may have already been taken into account in the projected housing demand from households projected to be displaced by redevelopment (see paragraph 14 above). As the designed working life of an ordinary building in Hong Kong is 50 years and those over 50 years stand a much higher chance of being targeted for redevelopment, households living in sub-divided units located in buildings aged above 50 have been excluded from the counting of IHHs in the projection, on the assumption that housing demand for these households should have been covered in the projection of demand from households affected by redevelopment. This is to avoid double counting in the projection of housing demand. According to results of the “Survey on Sub-divided Units in Hong Kong”, there are about 16 700 households living in sub-divided units located in buildings aged above 50. Therefore, the

projected housing demand from households living in sub-divided units located in buildings aged 50 or below is 22 700 + 36 300 – 16 700 = 42 300 units.

20. Based on the results of the 2011 Population Census and the "Survey on Sub-divided Units in Hong Kong", the estimated number of IHHs in Hong Kong is 74 900. The breakdown is summarised as follows –

	Category of IHHs	**Estimated number**	**Source of information**
(i)	Households living in units made up of temporary structures (e.g. huts, squatters and roof-top structures)	18 500	2011 Population Census
(ii)	Households living in non-residential buildings	3 000	2011 Population Census
(iii)	Households sharing the same unit with other households (e.g. those living in rooms, cubicles, bedspaces and cocklofts in the private permanent buildings)	11 100	2011 Population Census
(iv)	Households living in units with observable physical partitions and in buildings aged 50 or below	42 300	Survey on Sub-divided Units in Hong Kong
	Total	**74 900**	

21. As regards item (iv) above, it should be noted that as there are a wide range of different standards of sub-divided units in the market, the actual living environment varies under different circumstances. As regards item (iii) above, not **all** households currently sharing the same unit with other households (e.g. sharing rooms) are necessarily "inadequate housed" per se. Nonetheless, as mentioned above, the LTHS Steering Committee is inclined to take a conservative approach and count **all** of the households living in sub-divided units as well as **all** households sharing their units with other households as having housing needs which are currently not satisfied for the purpose of computing the long term housing demand projection.

(d) Miscellaneous

22. Apart from the above specific demand components set out above, a "miscellaneous" factor is included to reflect the demand in the next ten years which would otherwise be unaccounted for in C&SD's domestic household projections. These include –

(a) an increase of some 700 per year for private permanent living quarters occupied by "mobile residents[2] only" households, based on the past trend as observed from results of the Population Census 2001 and 2011;

(b) non-local students who might take up accommodation in Hong Kong. On this, we have drawn reference to the past trend of the number of student visas issued (from 10 900 in 2007/08 to 21 000 in 2011/12), and statistics from the Education Bureau and the University Grants Committee in 2011/12 that about 50% of these students (including undergraduates and postgraduate students) are not living in residential halls/hostels provided by the institutions. Assuming a similar trend of increase in the number of non-local students in the next ten years (i.e. a net increase of some 1 000 non-local students per year needing to find their own accommodation in the private housing market), and further assuming that on average two non-local students would share one housing unit, the estimated housing demand would amount to some 500 per year; and

(c) apart from the demand from the local population, there may be some buyers from outside Hong Kong who may purchase flats but without channelling them back to the market (i.e. not selling or leasing out their units). Drawing reference from statistics of the Inland Revenue Department (IRD) and the Rating and Valuation Department (RVD), it is estimated that the demand of non-local buyers who may take up flats but without channelling them back to the market, would be in the range of 1 500 to 3 000 units per year, i.e. a midpoint of about 2 250 units per year.

23. Assuming that the past trends (detailed in paragraph 22 above) will continue in the next ten years, there would be an additional housing demand of some 3 450 units per year (=700 + 500 + 2 250), or a total of 34 500 units over ten years.

(e) Gross total housing demand

24. Summing up components (a) to (d) above, the gross total housing demand would be 428 100 (=294 000 + 24 700 + 74 900 + 34 500) units for the ten-year projection period from 2013/14 to 2022/23. The gross total housing demand ultimately needs to be converted into public and private housing supply targets. While the public/private split is subject to further study by the LTHS

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[2] Mobile residents refer to Hong Kong permanent residents (HKPRs) who have stayed in Hong Kong for at least one month but less than three months during the six months before or after the reference time-point, regardless of whether they are in Hong Kong or not at the reference time-point.

Steering Committee, the estimated private housing demand needs to be further adjusted to take into account the vacancy rates at the beginning and end of the projection period.

(f) Vacancy rate in the private sector

25. More specifically on the estimated private housing demand, we have to take into account the vacancy rate in the private sector at the beginning of the projection period to reflect the fact that these vacant units may satisfy the housing needs of the community. As there are always a certain number of flats left vacant in the private sector at any point in time, we also need to make adjustments by taking into account the possible vacancy rate at the end of the projection period by drawing reference from the average vacancy rates in the private sector from 2003 to 2012.

(g) Total housing supply target

26. After adjusting for private sector vacancies at the beginning and end of the projection period, the preliminary total housing supply target would be **447 700 units**, **with a range of projections from 416 500 to 478 800 units** based on results of our econometric analysis.

Limitations

27. The projection results should provide an objective assessment on the potential levels of housing demand over the next ten years from 2013/14 to 2022/23, we are mindful that as with all methodologies used to derive projections for future events, the projection results inevitably have limitations. These limitations are set out in the ensuing paragraphs.

28. Our assumption is that the net change in the number of new households formed represents the number that will require adequate housing in the long term. It may be argued that some of the newly formed households may share accommodation with existing households, such as newly weds living with their parents, and thus not all of the newly formed households need new housing units. That said, in the context of Hong Kong, it is likely that in the long run they would like to have their own accommodation. Thus, we do not think that this would seriously affect the projection of long term housing demand.

29. Apart from the above, there may be overlapping in the housing needs arising from different demand components. For example, households displaced by redevelopment of private units may also overlap with households with mobile-residents only and non-local students; and the demand of non-local buyers may overlap with the demand from households with non-Hong Kong population only.

30. In light of the possible overlapping of demand components, we have conducted extensive research on the subject. Unfortunately, we cannot find a reliable way to accurately assess the above impact on the projected total housing demand. Nonetheless, we consider that the impact on the projection results should not be significant, as the bulk of the projected housing demand is from the projected increase in number of households.

31. Moreover, as stated above, the projection is premised on a large number of variables which are calculated on the basis of the latest policies, programmes and statistical trends, all of which may change over time. The household projection is also dynamic and may vary under different economic and property market circumstances.

32. We consider that these limitations can be addressed by producing a range of projections under different socio-economic and property market situations, and by reviewing the projection methodology and the projection results on an annual basis to provide updated projections. In so doing, the assumptions and the methodology for projecting the total housing demand for the upcoming ten-year period can be updated, re-examined and enhanced continuously to cater for the latest developments.

Way forward

33. Members are invited to note the projection methodology and preliminary results of the long-term housing demand for the ten-year period from 2013/14 to 2022/23 as deliberated by the LTHS Steering Committee. The public will be consulted on the long term housing demand projection, including the split between the public and private housing supply, during the three-month public consultation period to be conducted later this year.

Transport and Housing Bureau
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